

Original Research Article

Patient satisfaction in health care facility in hilly areas of Uttarakhand

Venkateshiva Reddy B., Arti Gupta*, Vandana Semwal, Amit Kumar Singh

Department of Community Medicine, Veer Chandra Singh Garhwali Government Medical Sciences and Research Institute, Uttarakhand, India

Received: 21 December 2017

Revised: 27 January 2018

Accepted: 29 January 2018

*Correspondence:

Dr. Arti Gupta,

E-mail: guptaarti2003@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Patient satisfaction is a proxy indicator of the quality of doctor or hospital performance. The present study aimed at to assess the patient satisfaction in the outpatient department of rural and urban health training centre, Uttarakhand, North India.

Methods: A hospital based cross sectional study. Simplified questionnaire was used for interviewing patients. For measurement of patient satisfaction in the outpatient department patient satisfaction questionnaire 18 was used with additional indices for nursing and paramedical staff.

Results: A total of 200 patients participated in the study. Overall majority of them were females 112 (60%). Mean age of the patients was 40.4 ± 19.5 years. Mean distance travelled to reach health facility was 13.5 ± 21.6 km. The mean score for general satisfaction was 3.96 ± 0.63 , for financial aspects was 3.82 ± 0.71 , for accessibility and convenience was 3.81 ± 0.65 , for interpersonal manner of doctor 4.29 ± 0.78 , for communication of doctor 4.38 ± 0.67 , for technical quality was 4.05 ± 0.58 and for time spent during the visit was 4.21 ± 0.70 . In the hierarchical stepwise multiple linear regression analysis the final model explained 85% of the variance in patient satisfaction.

Conclusions: Overall, patients expressed satisfaction with the care provided. These ratings may reflect modest patients' expectations as well as acceptable circumstances and performance.

Keywords: Patient, Satisfaction, Perception, Primary, Health care

INTRODUCTION

Patient satisfaction is an expression of an individual towards the health care provider and service.¹ Patient satisfaction is a surrogate indicator of the quality of health care hospital.² Patient satisfaction is also a substitute to assess health service performance.² Patient satisfaction comprises of various aspects. Patient satisfaction addresses individual's needs, ideas, concerns, reasons, expectations, preferences, comfort, support, relieving fear, anxiety; and response.⁴

The current healthcare delivery system is advancing towards continuous quality improvement.⁵ Healthcare

delivery system thus needs incorporating patient slant into quality assessment for to patient centered care. Therefore patient satisfaction has become a noteworthy health care outcome.⁶

The poor patient satisfaction causes poor compliance to treatment which ultimately leads to poor health outcomes. Therefore it is important to understand factors which influences patient satisfaction.⁷ Patient satisfaction can be influenced by patient expectation, age, disease, previous experience, health care provider, doctor patient relationship, gender and religion.⁸⁻¹² Therefore, feedback from patients is vital for recognizing the and improving the health care delivery system. Patients express their

views and opinions about the quality of health care they are availing by appraising various factors like access, cost, and others.¹³

The present study aimed at to assess the patient satisfaction in the outpatient department of rural and urban health training centre, Uttarakhand, North India.

METHODS

A hospital based cross sectional study was carried out in outpatient department at rural and urban health training centre, Department of Community Medicine, Veer Chandra Singh Garhwali Government Medical Sciences and research Institute, Uttarakhand, India. This centre are situated in a sprawling valley on the bank of Alaknanda river.

The rural health training centre, is a secondary health care centre working in premises of community health centre and had been playing a prominent role in providing medical care for nearly 90,000 people in Kritinagar Block, Tehri district. Patients are treated to the highest standards of quality medical care at minimal fees. The OPD is also supports the educational and clinical training of medical students and health care staff like ASHA, ANM within the ambulatory health system. Catering to the needs of patients on a daily basis are attending physicians with interns, along with a cadre of nursing and paramedical staff.

The urban health training centre, is situated in Srinagar, and it emphasis towards the provision of primary care of high quality, including preventive services. It caters a population of over 3000 thousand. This was conducted in September to December 2015. All eligible outdoor patients were considered for the study in case of pediatric age caregivers were included. The people who did not give consent were excluded from the study. A total of 200 patients were studied. Simplified questionnaire was used for interviewing patients. For measurement of patient satisfaction in the outpatient department patient satisfaction questionnaire 18 was used with additional indices for nursing and paramedical staff. Written consent was taken from the participants in the participant's consent form. Participant's information sheet was prepared. This participant information sheet was explained and given to the participants. It carries information regarding the study, its objectives, procedure and the rights of the participants.

Indicators used overall were general satisfaction, financial aspects, and convenience and accessibility. Technical quality, interpersonal manner, communication, time spent was assesses for doctors, nurses and paramedical staff, respectively.

Data were entered in Microsoft Excel 2007. Analysis was done in STATA 11. Mean score and Standard deviation was calculated. Test of significance, t test and ANOVA

was applied with p value less than 0.05 as significant. In the first step of our analysis, we used multiple linear regressions to examine the association between individual satisfaction measures and overall treatment experience, measured on a five-point scale. We entered variables in the regression model in block form in the following order: (1) demographic variables (2) presenting disorder/disease, (3) socioeconomic variables, and (4) health facility setting (5) health care provider satisfaction measures. Entering the variables in the model in block form enabled us to determine the percentage of variance in overall treatment experience explained by the satisfaction measures in contrast to the other variables. We examined studentized residuals to check whether our model met the assumptions for linear regression. The institute Ethics committee approved the study. Informed written consent was taken from the patient before starting data collection. Participants or their family members who were identified as having any disease was managed appropriately.

RESULTS

A total of 200 patients participated in the study. Overall majority of them were females 112 (60%). Mean age of the patients was 40.4 ± 19.5 years. 39% of patients were educated primary or less and 42% were not working. Mean monthly family income in rupees was 11718.5 ± 13457.3 . Mean distance travelled to reach health facility was 13.5 ± 21.6 km. A significant difference was found in mean distance travelled by patients to reach rural and urban health facility (Table 1).

The overall score distribution characteristics for the 7 subscales are presented in (Table 2). Measured on a 5-point scale (1- lowest satisfaction, 5- greatest satisfaction) the mean score for general satisfaction was 3.96 ± 0.63 , for financial aspects was 3.82 ± 0.71 , for accessibility and convenience was 3.81 ± 0.65 , for interpersonal manner of doctor 4.29 ± 0.78 , for communication of doctor 4.38 ± 0.67 , for technical quality was 4.05 ± 0.58 and for time spent during the visit was 4.21 ± 0.70 . Patient satisfaction subscales scores for financial aspects, accessibility and convenience, technical quality of doctors was found to be significantly higher among patients attending rural health training centre. Patients satisfaction score in all subscales of nurses and paramedical staff was significantly higher in rural health facility (Table 2). Patient satisfaction for doctors were significantly higher in patients aged more 40 years of age. Patient satisfaction for doctors, nurses and paramedical staff had significantly difference in rural and urban health training centre (Table 3).

In the hierarchical stepwise multiple linear regression analysis the overall patient satisfaction score had a mean 4.05 ± 0.45 . Demographic factors (Block 1, Table 4) explained 1% of the variance (adjusted $R^2 = 0.011$) in overall patient satisfaction when none of the other factors was controlled for. Socioeconomic and diagnosis

variables (Block 2,3, Table 4) explained an additional 8%, and health facility set up an additional 8% of the variance (Block 4, Table 4). The satisfaction with health facility staff other than doctors added 69% to patient satisfaction.

Altogether, the final model explained 85% of the variance in patient satisfaction (Table 4).

Table 1: Distribution of socio demographic variables of patients attended out patient department at rural and urban health facility.

Variable	Rural (%) 100 (50.0)	Urban (%) 100 (50.0)	Total n (%) 200 (100.0)	Chi square	P value
Age (in years)					
< 40	59	40	99 (49.5)	7.22	0.01
≥ 40	41	60	101 (50.5)		
Gender of the child					
Males	51	37	88 (44.0)	3.07	0.064
Females	49	63	112 (56.0)		
Education					
≤ primary school	39	39	78 (39.0)	6.31	.177
> primary school	61	61	122 (61.0)		
Occupation					
Not working	42	42	84 (42.0)	.000	1.00
Working	58	58	116 (58.0)		
Mean (SD) Monthly income of family (Rs)	11702.0 (12831.8)	11735 (14119.8)	11718.5 (13457.3)		0.986
Mean (SD) Distance travelled to health facility (km)	9.0 (12.1)	17.5 (27.4)	13.2 (21.6)		0.006

Table 2: Showing various domain of satisfaction level of patients in rural and urban health facility.

Domain	Rural Health Training Centre Mean SD	Urban Health Training Centre Mean SD	Total Mean SD	P value
Hospital				
General Satisfaction	4.03 (0.70)	3.89 (0.55)	3.96 (0.63)	0.11
Financial aspects	4.06 (0.77)	3.58 (0.54)	3.82 (0.71)	<0.001
Accessibility and Convenience	4.18 (0.66)	3.45 (0.36)	3.81 (0.65)	<0.001
Doctors				
Technical quality	4.30 (0.59)	3.80 (0.45)	4.05 (0.58)	<0.001
Interpersonal Manner	4.38 (0.77)		4.29 (0.78)	0.13
Communication	4.42 (0.65)	4.34 (0.68)	4.38 (0.67)	0.37
Time spent with doctor	4.17 (0.72)	4.26 (0.69)	4.21 (0.70)	0.37
Nurses				
Technical quality	4.35 (0.60)	3.58 (0.47)	3.97 (0.66)	<0.001
Interpersonal Manner	4.27 (0.83)	3.79 (0.74)	4.03 (0.82)	<0.001
Communication	4.41 (0.65)	3.99 (0.61)	4.20 (0.66)	<0.001
Time spent	4.08 (0.72)	3.33 (0.76)	3.70 (0.83)	<0.001
Paramedical staff				
Technical quality	4.30 (0.59)	3.40 (0.51)	3.85 (0.71)	<0.001
Interpersonal Manner	4.25 (0.85)	3.68 (0.72)	3.96 (0.83)	<0.001
Communication	4.41 (0.65)	3.90 (0.63)	4.16 (0.69)	<0.001
Time spent	4.07 (0.72)	3.20 (0.81)	3.63 (0.88)	<0.001

Table 3: Showing association of various socio-demographic factors of patients with the level of satisfaction with doctors, nurses and paramedical staff.

Variable	Satisfaction with Doctors Mean(SD)	Satisfaction with Nurses Mean(SD)	Satisfaction with Paramedical staff Mean(SD)
Age (in years)			
≤40	4.11 (0.37)	3.96 (0.47)	3.94 (0.49)
>40	3.98 (0.50)*	3.84 (0.55)	3.80 (0.57)
Sex			
Male	4.05 (0.47)	3.94 (0.54)	3.92 (0.55)
Female	4.04 (0.43)	3.87 (0.49)	3.84 (0.52)
Occupation			
Not working	4.02 (0.57)	3.87 (0.60)	3.84 (0.62)
Working	4.06 (0.33)	3.90 (0.51)	3.87 (0.54)
Education			
≤Primary	4.05 (0.50)	3.92 (0.57)	3.88 (0.60)
>Primary	4.04 (0.41)	3.89 (0.47)	3.87 (0.49)
Health facility			
RHTC	4.22 (0.53)	4.20 (0.53)	4.20 (0.54)
UHTC	3.86 (0.24)**	3.60 (0.26)**	3.55 (0.54)**

*p<0.05, **p<0.001

Table 4: Results of hierarchical stepwise multiple linear regression analyses.

Analysis Block	Adjusted R-square	Independent Variable	B	95%CI of B	β	P value
Dependant Variable= Overall patient satisfaction with Health facility						
Block 1						
Demographic factors	0.011	Sex	0.022	-0.04 to 0.09	0.025	0.482
		Age	-0.042	-0.1 to 0.01	-0.047	0.123
Block 2						
Diagnosis	0.007	Diagnosis	.002	-0.00 to 0.01	0.019	0.521
Block 3						
Socioeconomic factors	0.009	Education	-0.004	-0.04 to 0.03	-0.007	0.825
		Occupation	0.000	-0.06 to -0.06	0.000	0.981
		Income	0.004	-0.05 to 0.06	0.004	0.884
Block 4						
Health facility setup	0.162	Area (rural/urban)	0.172	0.10 to 0.24	0.192	<0.001
		Distance travelled	-0.041	-0.09 to 0.01	-0.043	0.140
Block 5						
Health facility staff other than doctor	0.849	Satisfaction with nurses	1.004	0.70 to 1.31	1.159	<0.001
		Satisfaction with paramedical staff	-0.124	-0.42 to 0.18	-0.149	0.410

B is the unstandardised regression coefficient.

DISCUSSION

The present study found the high patient satisfaction with rural and urban health facility. Patient satisfaction was found to be significantly higher among patients attending rural health training centre for financial aspects, accessibility and convenience, technical quality of doctors and all subscales of nurses and paramedical staff. This may be primarily due to lack of private health sector in rural region. Moreover, in the present study the rural

centre is attached to community health centre whereas as urban centre works as primary care centre. Most of the patients expressed their responses as satisfactory regarding the assessment of doctors and it was significant. The findings were nearly similar to the study was conducted to assess the satisfaction of clients receiving maternal and child health services. In respect of satisfaction, this study found responses of the clients were either satisfactory (54.31%) or good (23.56%) on maternal and child health services.¹⁴

This study identified patients and hospitals' characteristics affecting satisfaction with out-patient department experience. Most of the variance in ratings was observed at hospital level, confirming previous studies according to which variability is larger within organizations (hospitals or wards) than between organizations.^{15,16} The doctor's role in the patient assistance affects largely the overall patient satisfaction of hospital out-patient service regardless of the patients. Results confirmed also that older patients tended to rate the out-patient service more positively than the others. Also, nurses and paramedical staff affect the patient satisfaction.

The overall patient satisfaction in the outpatient department estimated in the present study was similar to a study conducted among inpatients in a private tertiary care hospital in India.⁴ It was also comparable to a study done in Madhya Pradesh and Kerala.^{17,18} Mean score of patient's satisfaction in outpatient department estimated in present study was higher to a study done in Jammu city (3.47), and in Lucknow in government allopathic facilities in the urban city and that of Saudi Arabia in primary health care setting.¹⁹⁻²¹ The present study reported in general treatment satisfaction was higher compared to other studies.^{7,22,23} This difference in estimation could be due to difference in the study setting. The hilly areas are still not creep in by private health sector as compared to plains.

In present study satisfaction towards patient doctor communication was similar to a study conducted in Chandigarh. It found the overall satisfaction regarding the doctor-patient, professional and behavioral communication was more than 80 percent at almost all the levels of health care facilities.²⁴

The strength of the study was the interviewer was not a member of the clinical team caring for the patients she/he was interviewing. This is hoped to have facilitated open and honest responding. The possible limitation was it is impossible to guarantee that all participants were completely open and honest in their responses, and study focused on patient satisfaction in outpatient unit only.

CONCLUSION

Overall, patients expressed satisfaction with the care provided. These ratings may reflect modest patients' expectations as well as acceptable circumstances and performance. Patients expressed concern about accessibility and convenience along with a concern of costs.

Recommendation

Patients' feedbacks are essential in order to measure performance and to make healthcare professionals more aware of aspects enhancing patient's satisfaction

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Hatamizadeh N, Jafari P, Vameghi R, Kazemnezhad A. Factors Affecting Client Satisfaction and Dissatisfaction in Out-Patient Rehabilitation Centers in Kurdistan Province in Iran. *Iran Red Crescent Med J.* 2012;14(2):119-20.
2. Prakash B. Patient Satisfaction. *J Cutan Aesthet Surg.* 2010;3(3):151-5.
3. Dayananda M, Rao S. Hospital and Health Services Administration: Principles and Practices. *Med J Armed Forces India.* 2004;60(1):92.
4. Kumar S, Haque A, Tehrani HY. High Satisfaction Rating by Users of Private-for-profit Healthcare Providers—evidence from a Cross-sectional Survey Among Inpatients of a Private Tertiary Level Hospital of North India. *North Am J Med Sci.* 2012;4(9):405-410.
5. Al-Abri R, Al-Balushi A. Patient Satisfaction Survey as a Tool Towards Quality Improvement. *Oman Med J.* 2014;29(1): 3-7.
6. Dawn AG, Lee PP. Patient Satisfaction Instruments used at Academic Medical Centers: Results of a Survey. *Am J Med Qual.* 2003;18(6):265-9.
7. Renzi C, Abeni D, Picardi A, Agostini E, Melchi CF, Pasquini P, et al. Factors associated with patient satisfaction with care among dermatological outpatients. *Br J Dermatol.* 2001;145(4):617-23.
8. Young-Mahon P. An analysis of the concept 'patient satisfaction' as it relates to contemporary nursing care. *Journal of Advanced Nursing.* 1996;24:1241-8.
9. Williams B. Patient satisfaction: a valid concept? *Soc Sci Med.* 1994;38(4):509-16.
10. Hall JA, Milburn MA. Why are sicker patients less satisfied with their medical care? Tests for two explanatory models. *Health Psychol.* 1998;17(1):70-5.
11. Crow R, Storey L, Page H. The measurement of patient satisfaction: Implications for health service delivery through a systematic review of the conceptual, methodological and empirical literature. *Health Tech Assessment.* 2003;6(32).
12. McGee H. Patient Satisfaction Surveys: Are they useful as indicators of quality of care? *J Health Gain.* 1998:5-7.
13. Singh H, Haqq ED, Mustapha N. Patients' perception and satisfaction with health care professionals at primary care facilities in Trinidad and Tobago. *Bull World Health Organ.* 1999;77(4):356-60.
14. Das P, Basu M, Tikadar T, Biswas G, Mridha P, Pal R. Client Satisfaction on Maternal and Child Health Services in Rural Bengal. *Indian J Community Med.* 2010;35(4):478-81.

15. Stubbe JH, Brouwe W, Delnoij DMJ. Patients' experiences with quality of hospital care: the Consumer Quality Index Cataract Questionnaire. *BMC Ophthalmol*. 2007;7:14.
16. Veenstra M., Hofoss D. Patient experience with information in a Hospital setting. A multilevel approach. *Medical Care* 2003;41(4):490–9.
17. Sodani PR, Kumar RK, Srivastava J, Sharma L. Measuring patient satisfaction: A case study to improve quality of care at public health facilities. *Indian J Community Med*. 2010;35(1):52-6.
18. Jawahar SK. A study on out patient satisfaction at a super speciality hospital in India. *Internet Journal of Medical Update*. 2007;2(2):13-7.
19. Outpatient services. Available from http://www.emedicinehealth.com/outpatient_service_s-health/page2_em.htm. Accessed on January 3, 2016.
20. Kumari R, Idris MZ, Bhushan V, Khanna A, Agarwal A, Singh SK. Study on Patient Satisfaction in the Government Allopathic Health Facilities of Lucknow District, India. *Indian J Community Med*. 2009;34(1):35-42.
21. Ali E, Ali S. A study of patient satisfaction with primary health care services in Saudi Arabia. *J Community Health*. 1993;18(1):49-54.
22. Esch BM, Marian F, Busato A, Heusser P. Patient satisfaction with primary care: an observational study comparing anthroposophic and conventional care. *Health Qual Life Outcomes*. 2008;6:74.
23. Stone GS, Jerotich TS, Cheriho BR, Kiptoo RS, Crowe SJ, Koros EK et al. Voice of the people: patient satisfaction on the medical wards at a Kenyan Referral Hospital. *Pan Afr Med J*. 2014;18:308.
24. Sharma R, Sharma M, Sharma RK. The patient satisfaction study in a multispecialty tertiary level hospital, PGIMER, Chandigarh, India. *Leadership in Health Services*. 2011;34(1):35–42.

Cite this article as: Venkatashiva RB, Gupta A, Semwal V, Singh AK. Patient satisfaction in health care facility in hilly areas of Uttarakhand. *Int J Community Med Public Health* 2018;5:1024-9.